

DSC#769

90-090B-03B

ULYSSES

HOURLY SPIN-AVG COUNTING RATES

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HOURLY SPIN-AVERAGE COUNTING RATE

90-090B-03B

THIS DATA SET CONSISTS OF 1 MAGNETIC TAPE. THE TAPE IS 9-TRACK, 6250 BPI. CREATED ON VAX COMPUTER, WRITTEN IN ASCII, WITH A LABEL NAME OF "ULYHIS". A DIRECTORY OF THE TAPE AS WELL AS A COPY OF THE SUPPORT DOCUMENTATIONS, AND FORMATS HAVE BEEN INCLUDED IN THE CATALOG.

THE D AND C NUMBER ALONG WITH IT'S TIME SPAN IS LISTED BELOW.

<u>D#</u>	<u>C#</u>	<u>FILES</u>	<u>TIMESPAN</u>
D-108355	C-032390	165	11/14/90-10/22/95

Directory \$1\$MUA1:[]

TEMP.TXT;1	TEST.TXT;1	ULYHSC_DE.90D;1	ULYHSC_DE.91A;1
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ULYHSC_DE.FMT;1	ULYHSC_EXP.TXT;1	ULYHSC_LEFS150.90D;1	
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ULYHSC_WWW.DOC;5			

Total of 165 files.

Ulysses WWI. Doc

1

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ULYSSES HOURLY AVERAGE INTERPLANETARY ENERGETIC PARTICLE DATA FROM HISCALE:  
UNIVERSITY OF KANSAS DATA SET ON WWW-----  
Data Set Coverage (yyy-mm-dd): 1990-11-14 to 1994-12-31Note: this coverage does not include the Jovian encounter interval from  
1992-02-02 to 1992-02-16.

Satellite: Ulysses

Experiment: HISCALE (Heliosphere Instrument for Spectra, Composition and  
Anisotropy at Low Energies)

Principal Investigator: Dr. Louis J. Lanzerotti, AT&amp;T Bell Laboratories

Data Set Contact: Prof. Thomas P. Armstrong, University of Kansas

Data Set Submission Date: 1995-07-17 (most recent data through 1994)

## Data Set Description:

This ASCII data set was provided via Wide World Web by the HISCALE team at the University of Kansas and includes spin-averaged hourly counting rates from the five sensors of the HISCALE instrument during the interplanetary phase of the Ulysses mission, not including the Jovian encounter from 1992-02-02 to 1992-02-16. The sensors include the two Low-Energy Foil Spectrometers (LEFS60 and LEFS150) at 60 and 150 degrees to the spacecraft spin axis, the two Low-Energy Magnetic Spectrometers (LEMS30 and LEMS120) at 30 and 120 degrees, and the Composition Aperture (CA 60), also called WARTD, at 60 degrees. The HISCALE experiment and data channels used in this data set are described in Lanzerotti et al, Astron. Astrophys. Suppl. Ser. 92, 349, 1992. Further details about the instrumentation and data set processing can be found in the HISCALE Data Analysis Handbook, available in hardcopy form from NSSDC. This data set is available on-line in the NSSDC Anonymous FTP directory as part of the Coordinated Heliospheric Observations (COHO) data base. See NSSDC's Ulysses flight project page under URL [http://nssdc.gsfc.nasa.gov/space/space\\_physics\\_home.html](http://nssdc.gsfc.nasa.gov/space/space_physics_home.html) for further details and updates.

## Datatypes:

- LEFS60 - Low Energy Foil Spectrometer measurements at 60 degrees to spacecraft spin axis for 42 - 290 electrons and 546 keV - 4.974 MeV ions.
- LEFS150 - Low Energy Foil Spectrometer measurements at 150 degrees to spacecraft spin axis for 40 - 280 keV electrons and 540 keV - 4.942 MeV ions.
- LEMS30 - Low Energy Magnetic Spectrometer measurements at 30 degrees to spacecraft spin axis for 56 keV - 5.0 MeV ions.
- LEMS120 - Low Energy Magnetic Spectrometer measurements at 120 degrees to

spacecraft spin axis for 61 keV - 4.752 MeV ions.

- DE - Deflected Electron measurements using special logic of LEMS30 sensor at 30 degrees to spacecraft spin axis for 30 - 300 keV electrons.
- W - Composition Aperture (CA 60) measurements at 60 degrees to spacecraft spin axis for 0.480 - 1.204 MeV protons, 0.380 - 6.984 MeV/nuc. alphas, 0.465 - 19.107 MeV/nuc. CNO ions, and 0.239 - 92.663 MeV/nuc. Fe group ions.
- WARTD - Composition Aperture (CA 60) measurements at 60 degrees to spacecraft spin axis of Z > 1 ions above 0.7 MeV, Z > 5 ions above 2.5 MeV, Z > 7 ions above 7.5 MeV, and Z > 10 ions above 9.0 MeV .

Data Set Files:

Note: The fields "yy" and "[A-D]" refer respectively to the 2-digit year and quarter (A > Jan.- Mar., B > Apr. - Jun., C > Jul. - Sept., D > Oct. - Dec.) of data included in the files listed below.

- ULYHSC\_WWW.DOC - main data set document file
- ULYHSC\_LEFS60.FMT - format file for LEFS60 datatype
- ULYHSC\_LEFS60.yy[A-D] - quarterly data files for LEFS60 datatype
- ULYHSC\_LEFS150.FMT - format file for LEFS150 datatype
- ULYHSC\_LEFS150.yy[A-D] - quarterly data files for LEFS150 datatype
- ULYHSC\_LEMS30.FMT - format file for LEMS30 datatype
- ULYHSC\_LEMS30.yy[A-D] - quarterly data files for LEMS30 datatype
- ULYHSC\_LEMS120.FMT - format file for LEMS120 datatype
- ULYHSC\_LEMS120.yy[A-D] - quarterly data files for LEMS120 datatype
- ULYHSC\_DE.FMT - format file for DE datatype
- ULYHSC\_DE.yy[A-D] - quarterly data files for DE datatype
- ULYHSC\_W.FMT - format file for W datatype
- ULYHSC\_W.yy[A-D] - quarterly data files for W datatype
- ULYHSC\_WARTD.FMT - format file for WARTD datatype
- ULYHSC\_WARTD.yy[A-D] - quarterly data files for WARTD datatype

Parameter Format for Data Files:

Each data file consists of ASCII listings of year (yyyy), day (ddd), hour (hh), minute (mm), and seconds (ss) of start time for hour interval, followed by a list of parameters defined in the corresponding format file for that HISCALE datatype. Headings are listed at the top of each data file for each parameter.

NSSDC Data Set ID: 90-090B-03B (tentative)

NSSDC Data Set Location:

Off-line > request via e-mail to request@nssdca.gsfc.nasa.gov  
On-line > COHO directory at nssdca::anon\_dir:[coho.ulyhsc.www\_kansas]  
Near-line > Ulysses project data set on NDADS (ingest in future)

**Acknowledgement:**

Please acknowledge the National Space Science Data Center and the Principal Investigator, Prof. Louis J. Lanzerotti of AT&T Bell Laboratories.

**Related Information:**

Other information about the Ulysses mission, experiments, and data sets at NSSDC may be obtained via World Wide Web and NSSDC's space physics page at [http://nssdc.gsfc.nasa.gov/space/space\\_physics\\_home.html](http://nssdc.gsfc.nasa.gov/space/space_physics_home.html). Non-WWW users may access NSSDC information in the NASA Master Directory and the NSSDC Master catalog via Internet login to the NSSDC On-Line Data Information Service (NODIS) at [nodis@nssdca.gsfc.nasa.gov](mailto:nodis@nssdca.gsfc.nasa.gov).

Ulysses data on NDADS (NASA's Data Archive and Distribution Service) may be located via WWW as above or via an e-mail message to ARMS (Automated Retrieval Mail System) at [archives@ndadsa.gsfc.nasa.gov](mailto:archives@ndadsa.gsfc.nasa.gov) with "HOLDINGS" on the subject line.

Ulysses Various Formats

About WARTD

WARTD counts ions.

Z2 Z > 1, E > 0.7 MeV

Z2A Z > 7, E > 7.5 MeV

Z3 Z > 5, E > 2.5 MeV

Z4 Z > 10, E > 9.0 MeV

WARTD

About LEMS30

LEMS30 counts ions at 30 degrees from the space-craft spin axis .

P1 56-78 keV ions

P2 78-130 keV ions

P3 130-214 keV ions

P4 214-337 keV ions

P5 337-594 keV ions

P6 594-1073 keV ions

P7 1.073-1.802 MeV ions

P8 1.802-5.0 MeV ions

LEMS30

About LEFS60

LEFS60 counts both electron and ions at 60 degrees from the space-craft spin axis .

E1' 42-65 keV electrons

E2' 64-112 keV electrons

E3' 112-178 keV electrons

E4' 178-290 keV electrons

FP5' 546-761 keV ions

FP6' 761-1223 keV ions

FP7' 1.223-4.974 MeV ions

LEFS60

About LEMS120

LEMS120 counts ions at 120 degrees from the space-craft spin axis .

P1' 61-77 keV ions

P2' 77-127 keV ions

P3' 127-207 keV ions

P4' 207-336 keV ions

P5' 336-601 keV ions

P6' 601-1123 keV ions

P7' 1.123-1.874 MeV ions

P8' 1.874-4.752 MeV ions

LEMS120

About W

W counts ions.

W1 0.480-0.966 MeV protons

W2 0.968-1.204 MeV protons

W3 0.380-1.278 MeV/nuc. alphas

W4 1.277-6.984 MeV/nuc. alphas

W5 0.465-1.709 MeV/nuc. CNO

W6 1.709-19.107 MeV/nuc. CNO

W7 0.239-0.840 MeV/nuc. Fe group

W8 0.840-92.663 MeV/nuc. Fe group

W

About LEFS150

LEFS150 counts both electron and ions at 150 degrees from the space-craft spi  
axis .

E1 40-65 keV electrons

E2 60-107 keV electrons

E3 107-170 keV electrons

E4 170-280 keV electrons

FP5 540-765 keV ions

FP6 765-1223 keV ions

FP7 1.223-4.942 MeV ions

LEFS150

About DE (Deflected Electrons)

The Deflected Electron measurements are made using special logic of the LEMS30 detector system.

DE1 30-50 keV electrons

DE2 50-90 keV electrons

DE3 90-165 keV electrons

DE4 165-300 keV electrons

DE